Work Order ID 113397 *113397* Page 1 Wednesday, February 12, 2014 2:50:53 PM Item ID: D3447-1 Accept *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Round Spacer *8* **Start Date:** 2/12/2014 Start Qty: 8.00 **Cust Item ID: Required Date: 2/28/2014 Reg'd Oty:** 8.00 *****2* **Customer:** Reference: Run Process Plan: W **Approvals:** Date: 14-2-12 Tooling: Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ **Tool ID** Reject Tool # Plan Accept Reject Insp. **Work Center ID Description Run Hours** Qty Qty Code Number Stamp **Draw Nbr Revision Nbr** D3447 Rev A 100 0.00 Small Fab CC 14-2-25 (8x *100* Small Fab 0.00 Small Fab Cut to length: 1.600" long as per Dwg D3447 Rev: DeburrIdentify as D3447-1 DAS 27 QC5- Inspect part completeness to step on W/O 110 *110* OC 0.00 Memo **Quality Control** 120 Chemical Conversion Coat per QSI005 4.1 0.00 8 76, 14.2.27

0.00

Memo

120 HandFinish

Hand Finishing

									DQA:	Date:	
NCR: Y	es / No				WORK ORDER NON-C	ONFO	QA Closed:	Date:			
Mark Orda	or.				DISPOSITION	AGAINST DE	PARTMENT	/PROCESS			
Part No					Scrap Machining Small Fab			achining Small Fab oforming Finishing	Pro Rec/Sto	Engineering Quality Other	
Root		ļ		Descri	ption of work order update	Initia	П	Action	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Chief E	ng	Description	Date	Verification	QC Inspector
Doc/Data											
Equip/Tooling											
Operator										•	
Material											
Setup											
Other			į								·
Process											
Supplier											
Training			ļ								
Unapproved		<u> </u>	<u> </u>				l_				
					F.	AULT CA	TEG	ORY			
Landi	ng Gear				General				_		-
	Bending				Bend	Grai	in		Ovalized		Pressure/Forced
	Centre N	ot Conce	ntric to	o/s	BOM/Route	Hard	dware	e	Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Insp	ection	n Incomplete	Part Incorre	ct	Weld
	Crushed/	Crimped.			Burrs	Instr	uctio	ons Incomplete/Unclear	Part Lost/M	issing	Wrong Stock Pulled
	Cuffs				Contamination	Mai	nten	ance	Part Moved		
	Heat Trea	at			Countersink	Mislabeled				Vrong	

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Work Ord Wednesday, Feb			W			*		Page	2				
Item ID: Revision ID: Item Name:	D3447-1 Round Spacer 2/12/2014			Accept	*N900	V900040100				Start Stop	·· I 😘	S1*	
Start Date: Required Date: Reference:			*8* *8*		Cust Item :								
Approvals:	Process Pla	an:	Date:	Tooling:	D	Date:			Run	Start	*N	R1*	
	QC:		Date:	SPC (Y/N):	D	ate:				Stop	*N	R2*	
Sequence ID/ Work Center II 130 *130*	D	Operation Description Green Sandtex(Ref:4.3.5	.8) per QS1005 4.3	Set Up/ Run Hours 0.00	Tool ID	Tool #	Plan Code	Accep Qty	t Rej Qty	y I	Reject Number	Insp. Stamp	34
Powder Coating		Memo Mask inside TEMPERAT	wallSTARETIME: TURE:FINI	O.00 / HO OVEN SH TIME:	10.				— <i>T</i> —		<u> </u>		-
140 *1 <u>4</u> 0 *		QC3- Inspect Part Finish		0.00 PAS 0.00 27 9 89 0.00 U C), ,			8					

150

Identify as per dwg & Stock Location: MESS Z 0.00

150 Packaging

Quality Control

Memo

0.00

CC 14-3-5 (8x)

Packaging

NCR:	res	/ No				WORK ORDER NON-	JUI	NFUKI	VIANCE / UPI		QA Closed:	Date	•			
						DISPOSITION		AGAINST DEPARTMENT/PROCESS								
Work Orde	er:					DISPOSITION	DISPOSITION AGAINST					DEPARTIMENT/PROCESS				
Part No.						Rework Scrap Use-as-is	Skid-tube Crosstube Machining Small Fab Thermoforming Finishing				Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other				
NCR I	No.					Work Order Update	- I			Composite	·					
Root					Descri	ption of work order update	1	nitial	Act	tion	Sign &					
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	QC Inspector			
Doc/Data																
Equip/Tooling																
Operator		 														
Material	<u> </u>															
Setup	L	ĺ														
Other	_				ŀ											
Process																
Supplier	<u> </u>															
Training 	⊢															
Unapproved	<u> </u>		l	<u> </u>	<u> </u>		<u> </u>	T CATE	CORY		<u></u>		<u> </u>			
Landi		Soor				General	AUL	T CATE	GORT							
Lanui	ing (Bending			Г	Bend		Grain			Ovalized	Г	Pressure/Forced			
	-	Centre No	nt Concei	ntric to		BOM/Route	_	Hardwa	uro.	 	Over/Under	tolerance	Temperature/Cure			
	H	Cracks	or concei	iti ic to	°′°	Broken/Damaged		-	ion Incomplete		Part Incorre	-	Weld			
	\vdash	1	Crimped			Burrs		4 `	ions Incomplete/	Unclear	Part Lost/Mi	-	Wrong Stock Pulled			
	\vdash	Crushed/Crimped.				Contamination	\vdash	Mainte	•	-	Part Moved					
					Countersink		Mislabe	•		Positioned V	Wrong					
						Cut Too Short		Misread			Power Loss/	_	Other			
		Ripples in				Drill Holes	\vdash	Offset		<u> </u>		~ <u>_</u>				
		Torque Waves in Extrusion Drawing						Out of Calibration								
		Turning S	equence			Finish		Out of								

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

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Work Order ID 113397 *113397* Page 3 Wednesday, February 12, 2014 2:50:53 PM Item ID: D3447-1 Accept *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Round Spacer **Start Date:** 2/12/2014 **Start Qty: 8.00** *8* **Cust Item ID: Required Date: 2/28/2014** Req'd Qty: 8.00 *****2* **Customer:** Reference: Run Start Approvals: Process Plan: Date: **Tooling:** Date: Stop QC: Date:_____ SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Reject Accept Reject Insp. Work Center ID **Description Run Hours** Code Qty Qty Number Stamp 160 QC21- Final Inspection - Work Order Release 0.00 *160* OC 0.00 Memo Quality Control

NCR:	NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE QA Closed: Date:													
Work Order:						DISPOSITION Rework	7	AGAINST DEPARTMENT/PROCESS Skid-tube Crosstube Water Jet Engineering						
Part No						Scrap Machining Small Fab Use-as-is Thermoforming Finishing Work Order Update Large Fab Composite			Pro Rec/Sto	Quality Other				
Root					Descri	ption of work order update		nitial	Acti	on	Sign &			
Cause		Date	Step	Qty	. (or Non-conformance	Ch	ief Eng	Descri	ption	Date	Verification	QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved								T CATE						
Landi	na (r General	AUL	.i CAIE	JORT					
Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion			Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Grain Hardware Inspection Incomplete Instructions Incomplete/Unclear Maintenance Mislabeled Misread Offset Out of Calibration			Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned N Power Loss/	ct issing Wrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other				

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Finish

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Picklist Print

Wednesday, February 12, 2014 2:50:52 PM

Work Order ID: 113397

113397

Parent Item:

D3447-1

D3447-1

Parent Item Name: Round Spacer

Start Date: 2/12/2014

Required Date: 2/28/2014

Page 1

Start Qty: 8.00

Required Qty: 8.00

Comments:

IPP A05.10.19New issueKJ/EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Primary Item Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6T1.000W065		Purchased	No		100	f	164.7590	0.1438	2			

M6061T6T1 000W065

6061T6 RD TUBE 1.00 x .065w

Location	Loc Oty	Loc Code	
MAT015	164.759	•	<u> 25(2,)</u>
125519	102.67		
M126183	2		
M128084	60.089		

**

WORK ORDER NON-CONFORMANCE / UPDATE NCR: Yes / No QA Closed: Date: DISPOSITION AGAINST DEPARTMENT/PROCESS Work Order: Skid-tube Rework Crosstube Water Jet Engineering Small Fab Prod. Eng. Coor. Quality Part No. Scrap Machining Rec/Store/Packaging Thermoforming Use-as-is Finishing Other NCR No. Work Order Update Large Fab Composite Supplier Description of work order update Initial Action Sign & Root Chief Eng Cause Date Step Qty or Non-conformance Description Date Verification QC Inspector Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved **FAULT CATEGORY Landing Gear** General Bending Bend Grain Ovalized Pressure/Forced Centre Not Concentric to O/S BOM/Route Over/Under tolerance Temperature/Cure Hardware Broken/Damaged Cracks Inspection Incomplete Part Incorrect Weld Instructions Incomplete/Unclear Wrong Stock Pulled Crushed/Crimped. Burrs Part Lost/Missing Cuffs Maintenance Contamination Part Moved Heat Treat Countersink Mislabeled Positioned Wrong Inspection Strip in Tube **Cut Too Short** Misread Power Loss/Surge Other **Drill Holes** Ripples in Bend Offset

Out of Calibration

Out of Sequence

Outside Dimensions

DQA:

Date:

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

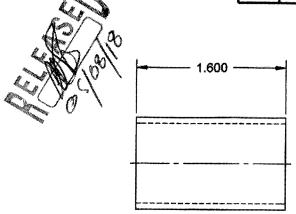
Drawing

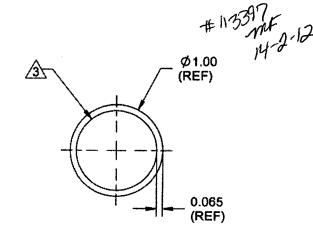
Finish

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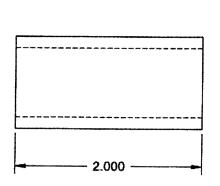
DESIG	DRA	WN BY	DART AEROSPACE I HAWKESBURY, ONTARIO, CAN				
CHECK	APRI		D3447	REV. A SHEET 1 OF 4			
DATE	05.07.19	9	BLADE FOLD KIT PARTS	SCALE 1:1			
Α	05.07.1	19	NEW ISSUE				

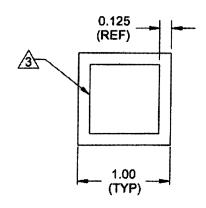




D3447-1 ROUND SPACER

1) MATERIAL: 6061-T6 OR 6061-T62 TUBING PER WW-T-700/6 OR AMS 4080 OR AMS 4082 OR QQ-A-200/8 OR QQ-A-225/8 (REF. DART SPEC. M6061T6T1.000W.065)





D3447-3 SQUARE SPACER

1) MATERIAL: 6061-T6 (OR 6061-T651/ T6510/ T6511/ T62) SQUARE TUBING PER AMS-QQ-225/8 (OR AMS 4117/ 4128/ 4115/ 4116) OR PER AMS-QQ-200/8 (OR AMS 4160) (REF. DART SPEC. M6061T6TS1.000W.125)

NOTES:

- 2) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
 3) MASK INSIDE OF TUBING BEFORE PAINTING.
 4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
 6) ALL DIMENSIONS ARE IN INCHES
 7) BREAK ALL SHARP EDGES 0.005 TO 0.010

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		DQA: Date:
NCR: Yes / N	o WORK ORDER NON-CONFORMANCE / UPDATE	

										QA Closed:	Date:				
Work Orde	r:				DISPOSITION	_	AGAINST DEPARTMENT/PROCESS								
Part No					Scrap Machining Small Fab Use-as-is Thermoforming Finishing			Crosstube Small Fab Finishing Composite	Water Jet Engineering Prod. Eng. Coor. Quality Rec/Store/Packaging Other Supplier						
Root	t Desc			Descri	ption of work order update	Ini	Initial Action			Sign &					
Cause	Date	Step	Qty	(or Non-conformance	Chie	f Eng	Desc	ription	Date	Verification	QC Inspector			
Doc/Data															
Equip/Tooling															
Operator															
Material		1			ı	1									
Setup															
Other		1						:							
Process		1													
Supplier						•									
Training															
Unapproved		<u> </u>										<u> </u>			
				<u></u>		AULT	CATE	GORY							
Landin	ng Gear			_	General					7	F	–			
_	Bending			_	Bend		irain		<u> </u> _	Ovalized	<u> </u>	Pressure/Forced			
		ot Conce	ntric to (^{D/S}	BOM/Route	_	ardwa			Over/Under	 	Temperature/Cure			
	Cracks			<u> </u>	Broken/Damaged	_		on Incomplete	, <u> </u>	Part Incorre	—	Weld			
	Crushed	'Crimped.		<u> </u>	Burrs	_		ions Incomplete	/Unclear	Part Lost/M	issing	Wrong Stock Pulled			
-	Cuffs				Contamination	\vdash		enance	-	Part Moved	• •				
-	Heat Tre		T1.	<u> </u>	Countersink	\vdash	/lislabe		<u> </u>	Positioned V		Other			
	Inspection		rube	<u> </u>	Cut Too Short		Aisreac	ז		Power Loss/	Surge	Jotner			
-				, -	4	-		Calibration							
-	— 1			' ├	-1 ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~										
-		•		 	Folio	-		e Dimensions							
 - -	Ripples in Bend Torque Waves in Extrusion Turning Sequence Wave/Twist in Tube				Drill Holes Drawing Finish		Offset Out of Calibration Out of Sequence								

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